

# Highly Erodible Soil Map Unit List - Norman County, MN

C = .30

R = 80

This data is only to be used for HEL determinations.

This is the "frozen data" based on 01/01/1990 information.

Values other than "HELC" should only be used for PHEL.

musym	muname	HELC	T	I
Af	Alluvial land, frequently flooded	NHEL	5	56
Ad	Alluvial land, occasionally flooded	NHEL	5	56
I156A	Antler silt loam, 0 to 1 percent slopes	NHEL	5	86
As	Arveson and Hamar soils, depressional	HEL	5	134
I720A	Arveson and Venlo soils, 0 to 1 percent slopes	HEL	3	86
I716A	Arveson clay loam, 0 to 1 percent slopes	NHEL	4	86
Ar	Arveson loam	NHEL	4	86
I721A	Arveson loam, 0 to 2 percent slopes	NHEL	4	86
Aw	Augsburg and Wheatville loams	NHEL	4	86
I633A	Augsburg and Wheatville loams, 0 to 2 percent slopes	NHEL	4	86
I2A	Augsburg very fine sandy loam, clayey till substratum, 0 to 2 percent slopes	NHEL	4	86
I110A	Augsburg, Borup, and Colvin soils, very poorly drained, 0 to 1 percent slopes	NHEL	4	86
BaA	Barnes loam, 0 to 2 percent slopes	NHEL	5	48
BaB	Barnes loam, 2 to 6 percent slopes	NHEL	5	48
BaB2	Barnes loam, 2 to 6 percent slopes, eroded	NHEL	5	48
BaC2	Barnes loam, 6 to 12 percent slopes, eroded	NHEL	5	48
BbB2	Barnes-Langhei loams, 2 to 6 percent slopes, eroded	NHEL	5	86
I467A	Bearden silt loam, 0 to 1 percent slopes	NHEL	5	86
I119A	Bearden silty clay loam, 0 to 1 percent slopes	NHEL	5	86
BcA	Bearden silty clay loam, 0 to 2 percent slopes	NHEL	5	86
BcB	Bearden silty clay loam, 2 to 6 percent slopes	NHEL	5	86
BcC2	Bearden silty clay loam, 2 to 8 percent slopes, eroded	NHEL	5	86
Bf	Bearden-Fargo silty clay loams	NHEL	5	86
Bp	Borup and Glyndon loams	NHEL	4	86
I669A	Borup and Glyndon loams, 0 to 2 percent slopes	NHEL	4	86
I5A	Borup loam, 0 to 2 percent slopes	NHEL	4	86
Bo	Borup loam, depressional	NHEL	4	86
I6A	Borup very fine sandy loam, 0 to 2 percent slopes	NHEL	4	86
Br	Breaks and Alluvial land	NHEL	5	86
I748A	Bygland silty clay loam, 0 to 2 percent slopes	NHEL	5	38
CaA	Cashel silty clay, 0 to 2 percent slopes	NHEL	5	86
CaC	Cashel silty clay, 2 to 8 percent slopes	NHEL	5	86
Cb	Cathro muck	HEL	5	134
I8A	Cathro muck, 0 to 1 percent slopes	HEL	5	134
I9A	Clearwater clay, 0 to 2 percent slopes	NHEL	5	86

Cn	Colvin silty clay loam	NHEL	5	86
I376A	Colvin silty clay loam, 0 to 1 percent slopes	NHEL	5	86
Co	Colvin silty clay loam, depressional	NHEL	5	86
I530A	Colvin silty clay loam, very poorly drained, 0 to 1 percent slopes	NHEL	5	86
I666A	Colvin-Perella silty clay loams, 0 to 2 percent slopes	NHEL	5	86
DaB	Darnen silt loam, 1 to 4 percent slopes	NHEL	5	48
I11A	Deerwood muck, 0 to 1 percent slopes	HEL	3	134
Du	Dune land	HEL	5	250
FaA	Fargo silty clay loam, 0 to 1 percent slopes	NHEL	5	38
I233A	Fargo silty clay loam, 0 to 1 percent slopes	NHEL	5	86
FaB	Fargo silty clay loam, 1 to 6 percent slopes	NHEL	5	86
FcA	Fargo silty clay, 0 to 1 percent slopes	NHEL	5	86
I229A	Fargo silty clay, 0 to 1 percent slopes	NHEL	5	86
FcB	Fargo silty clay, 1 to 6 percent slopes	NHEL	5	86
Fd	Fargo silty clay, depressional	NHEL	5	86
I235A	Fargo silty clay, depressional, 0 to 1 percent slopes	NHEL	5	86
Ff	Flaming loamy fine sand, wind eroded	HEL	5	134
Fh	Flaming, Hamar, and Arveson soils	HEL	5	134
Fv	Flom and Vallers soils, depressional	NHEL	5	86
I683A	Flom clay loam, 0 to 1 percent slopes	NHEL	5	48
Fm	Flom silty clay loam	NHEL	5	48
I109A	Fluvaquents, 0 to 2 percent slopes, frequently flooded	NHEL	5	86
I16F	Fluvaquents,frequently flooded-Hapludolls complex, 0 to 30 percent slopes	NHEL	5	86
FxA	Foxhome loam, 0 to 3 percent slopes	NHEL	3	56
I19A	Foxhome sandy loam, 0 to 3 percent slopes	NHEL	3	86
I20A	Foxlake loam, 0 to 2 percent slopes	NHEL	5	86
I400A	Gilby loam, 0 to 1 percent slopes	NHEL	5	86
GlA	Glyndon loam, 0 to 2 percent slopes	NHEL	5	86
I22A	Glyndon loam, 0 to 2 percent slopes	NHEL	5	86
GlB	Glyndon loam, 2 to 6 percent slopes	NHEL	5	86
I507B	Glyndon loam, dry, 2 to 6 percent slopes	NHEL	5	86
I711A	Glyndon loam, thin surface, 0 to 2 percent slopes	NHEL	5	86
Gn	Glyndon loam, wind eroded	NHEL	5	86
Gp	Gravel pits	HEL	5	134
Gr	Grimstad fine sandy loam	NHEL	5	86
I24A	Grimstad fine sandy loam, 0 to 3 percent slopes	NHEL	5	86
I730A	Gunclub silty clay loam, 0 to 2 percent slopes	NHEL	5	86
Ha	Hamar loamy fine sand	HEL	5	134
I25A	Hamar loamy fine sand, 0 to 2 percent slopes	NHEL	5	134
HeA	Hamerly silt loam, 0 to 1 percent slopes	NHEL	5	86
HeB	Hamerly silt loam, 1 to 5 percent slopes	NHEL	5	86
Hm	Hamerly-Vallers silt loams	NHEL	5	86
Hn	Hangaard sandy loam	HEL	2	86

I28A	Hangaard sandy loam, 0 to 2 percent slopes	HEL	2	86
I773E	Hapludolls-Fluvaquents, occasionally flooded complex, 0 to 30 percent slopes	NHEL	5	86
I773A	Hapludolls-Fluvaquents, occasionally flooded complex, 0 to 6 percent slopes	NHEL	5	86
I15A	Hecla loamy fine sand, 0 to 3 percent slopes	NHEL	5	134
I364A	Hecla-Garborg-Arveson complex, 0 to 2 percent slopes	NHEL	5	134
Ho	Hegne-Fargo silty clays	NHEL	5	86
I130A	Hegne-Fargo silty clays, 0 to 2 percent slopes	NHEL	5	86
Hv	Hegne-Viking complex	NHEL	5	86
I34A	Huot fine sandy loam, clayey till substratum, 0 to 3 percent slopes	NHEL	4	86
I849A	Kittson fine sandy loam, wet, 0 to 2 percent slopes	NHEL	5	56
KsA	Kittson loam, 0 to 2 percent slopes	NHEL	5	56
I36A	Kittson loam, 0 to 3 percent slopes	NHEL	5	56
I36B	Kittson loam, 2 to 6 percent slopes	NHEL	5	56
KsC	Kittson loam, 2 to 8 percent slopes	NHEL	5	56
KtA	Kittson loam, uplands, 0 to 1 percent slopes	NHEL	5	56
KtB	Kittson loam, uplands, 1 to 5 percent slopes	NHEL	5	56
I690A	Kittson loam, wet, 0 to 3 percent slopes	NHEL	5	56
I37A	Kratka and Strathcona soils, 0 to 1 percent slopes	NHEL	5	86
I594A	LaDelle silt loam, 0 to 2 percent slopes, occasionally flooded	NHEL	5	48
I795A	Lamoure silt loam, 0 to 2 percent slopes, frequently flooded	NHEL	5	86
LbD2	Langhei-Barnes loams, 12 to 18 percent slopes, eroded	HEL	5	86
LbE	Langhei-Barnes loams, 18 to 30 percent slopes	HEL	5	86
LbC2	Langhei-Barnes loams, 6 to 12 percent slopes, eroded	PHL	5	86
I624A	Lindaas silty clay loam, 0 to 1 percent slopes	NHEL	5	38
I673B	Lohnes coarse sandy loam, 1 to 6 percent slopes	NHEL	5	86
MaA	Maddock loamy fine sand, 0 to 2 percent slopes	HEL	5	134
I40B	Maddock loamy fine sand, 1 to 6 percent slopes	HEL	5	134
MaC	Maddock loamy fine sand, 2 to 8 percent slopes	HEL	5	134
Me	Markey muck	HEL	4	134
I41A	Markey muck, 0 to 1 percent slopes	HEL	4	134
Mh	Marsh	NHEL	5	134
I43A	Mavie fine sandy loam, 0 to 2 percent slopes	NHEL	3	86
Mm	Mavie loam	HEL	3	86
IM-W	Miscellaneous water	NHEL		
I731A	Nielsville silty clay loam, 0 to 1 percent slopes	NHEL	5	86
I732A	Nielsville-Perella silty clay loams, 0 to 1 percent slopes	NHEL	5	86
PB	Pits, borrow	NHEL		
IGp	Pits, gravel and sand	NHEL	5	134
I47A	Poppleton fine sand, 0 to 2 percent slopes	HEL	5	134
Po	Poppleton loamy fine sand	HEL	5	134
I48A	Radium loamy sand, 0 to 3 percent slopes	NHEL	5	134
I651A	Reis, very-fine-Viking silty clays, 0 to 2 percent slopes	NHEL	5	86
I52A	Reis-Clearwater complex, 0 to 2 percent slopes	NHEL	5	86

I823A	Rockwell and Kratka soils, 0 to 1 percent slopes	NHEL	5	86
Rk	Rockwell and Kratka soils, depressional	NHEL	5	86
Rc	Rockwell fine sandy loam	NHEL	5	86
I171A	Rockwell fine sandy loam, 0 to 1 percent slopes	NHEL	5	86
I699A	Rockwell loam, 0 to 2 percent slopes	NHEL	5	86
Ro	Roliss loam	NHEL	5	48
I53A	Roliss loam, 0 to 2 percent slopes	NHEL	5	48
Rs	Roliss loam, depressional	NHEL	5	48
I54A	Roliss loam, very poorly drained, 0 to 1 percent slopes	NHEL	5	48
I853A	Roliss silt loam, 0 to 1 percent slopes	NHEL	5	48
Ru	Rondeau muck	HEL	5	134
I55A	Rosewood fine sandy loam, 0 to 2 percent slopes	NHEL	3	86
I56A	Rosewood-Venlo complex, 0 to 1 percent slopes	NHEL	3	86
I681C	Sandberg loamy sand, 6 to 12 percent slopes	PHEL	3	86
I57B	Sandberg-Radium complex, 1 to 6 percent slopes	PHEL	5	134
Sc	Seelyeville muck	HEL	5	134
I58A	Seelyeville muck, 0 to 1 percent slopes	NHEL	5	134
I348F	Serden-Serden, thin surface fine sands, 6 to 35 percent slopes	HEL	5	250
I475B	Sinai silty clay, levees, 0 to 6 percent slopes	NHEL	5	86
SmE	Sioux and Maddock soils, 12 to 36 percent slopes	HEL	2	86
I671A	Sioux gravelly sandy loam, 0 to 2 percent slopes	HEL	2	86
SgA	Sioux gravelly sandy loam, 0 to 2 percent slopes	NHEL	2	48
I671B	Sioux gravelly sandy loam, 2 to 6 percent slopes	NHEL	2	48
SgC	Sioux gravelly sandy loam, 2 to 8 percent slopes	NHEL	2	48
I672A	Sioux sandy loam, 0 to 2 percent slopes	HEL	2	86
SdA	Sioux sandy loam, 0 to 2 percent slopes	HEL	2	86
I672B	Sioux sandy loam, 2 to 6 percent slopes	HEL	2	86
SdB	Sioux sandy loam, 2 to 6 percent slopes	HEL	2	86
SnA	Sverdrup fine sandy loam, 0 to 2 percent slopes	NHEL	4	86
SnC	Sverdrup fine sandy loam, 2 to 8 percent slopes	NHEL	4	86
SwA	Swenoda fine sandy loam, 0 to 2 percent slopes	NHEL	5	86
I209A	Swenoda fine sandy loam, 0 to 3 percent slopes	NHEL	5	86
SwC	Swenoda fine sandy loam, 2 to 8 percent slopes	NHEL	5	86
I209C	Swenoda fine sandy loam, 3 to 9 percent slopes	NHEL	5	86
I170A	Swenoda loam, 0 to 3 percent slopes	NHEL	5	86
Sy	Syrene sandy loam	HEL	3	86
I62A	Syrene sandy loam, 0 to 2 percent slopes	HEL	3	86
To	Towner loamy fine sand	HEL	5	134
U1A	Ulen fine sandy loam, 0 to 2 percent slopes	NHEL	5	86
I64A	Ulen fine sandy loam, 0 to 3 percent slopes	NHEL	5	134
I791A	Ulen fine sandy loam, thin surface, 0 to 3 percent slopes	NHEL	5	134
Un	Ulen fine sandy loam, wind eroded	NHEL	5	86
I65A	Ulen loamy fine sand, 0 to 3 percent slopes	NHEL	5	134

Va	Vallers silt loam	NHEL	5	86
Vd	Vallers silt loam, depressional	NHEL	5	86
I344A	Venlo fine sandy loam, 0 to 1 percent slopes	NHEL	3	86
Vk	Viking clay loam	NHEL	5	86
I646A	Viking clay loam, 0 to 2 percent slopes	NHEL	5	86
WaA	Wahpeton silty clay, 0 to 2 percent slopes	NHEL	5	86
I248A	Wahpeton silty clay, 0 to 2 percent slopes, occasionally flooded	NHEL	5	86
WaB	Wahpeton silty clay, 2 to 6 percent slopes	NHEL	5	86
I248B	Wahpeton silty clay, 2 to 6 percent slopes, occasionally flooded	NHEL	5	86
WaC	Wahpeton silty clay, 6 to 12 percent slopes	NHEL	5	86
I248C	Wahpeton silty clay, 6 to 9 percent slopes, occasionally flooded	NHEL	5	86
W	Water			
INT	Water, intermittent			
M-W	Water, miscellaneous			
WkA	Waukon loam, 0 to 2 percent slopes	NHEL	5	48
WkD	Waukon loam, 12 to 18 percent slopes	HEL	5	48
WkB	Waukon loam, 2 to 6 percent slopes	NHEL	5	48
WkB2	Waukon loam, 2 to 6 percent slopes, eroded	NHEL	5	48
WkC	Waukon loam, 6 to 12 percent slopes	NHEL	5	48
Wm	Wheatville loam	NHEL	4	86
I655A	Wheatville loam, 0 to 1 percent slopes	NHEL	4	86
I625C	Zell, fine-silty-LaDelle silty clay loams, 1 to 9 percent slopes	NHEL	5	86